

FIG. 1

FIG. 2 is a schematic diagram of a gasification system 10, showing the flow of material from a fuel source through a gasifier, cyclone, and boiler, and the flow of air through a multicone air heater and char burner.

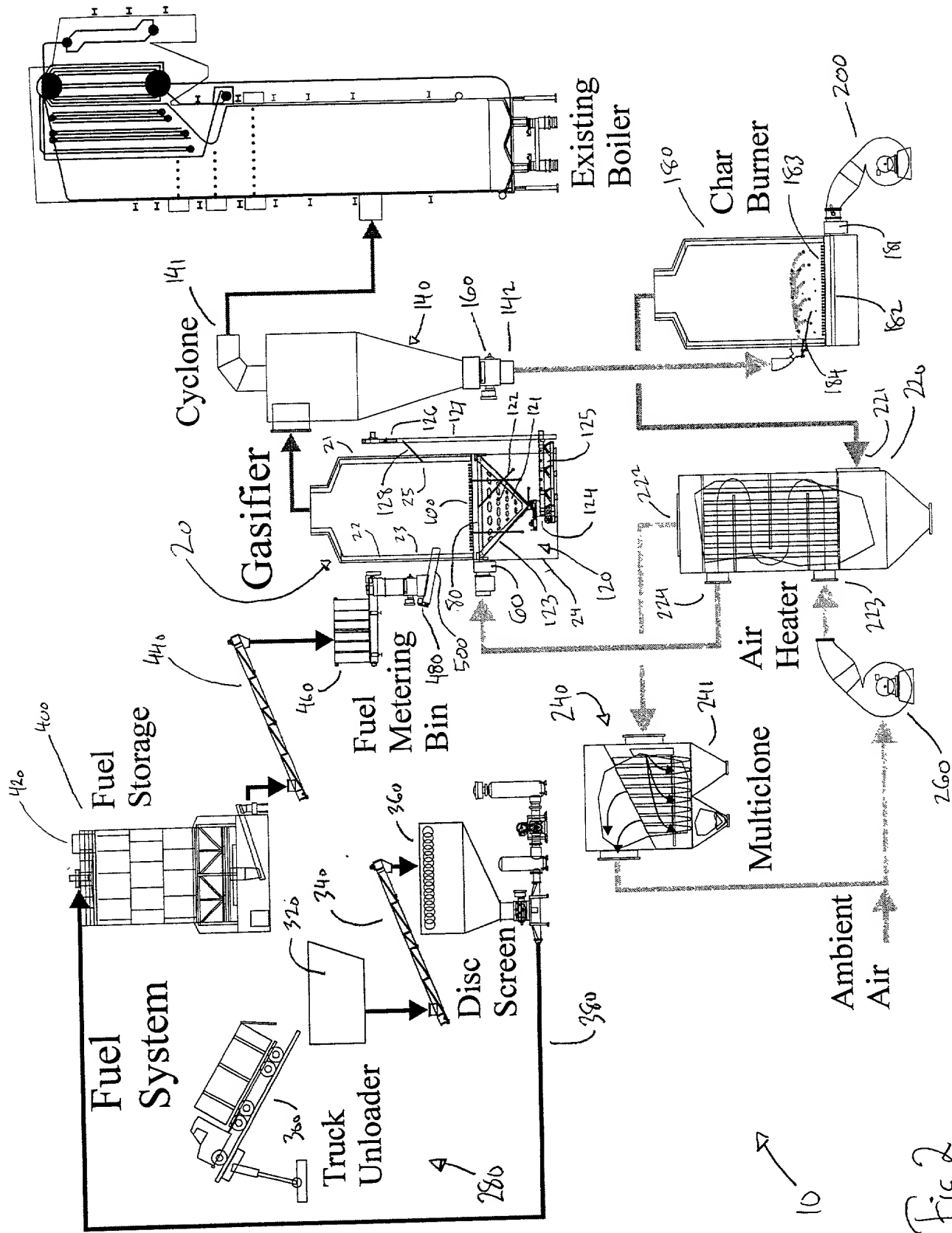


Fig 2

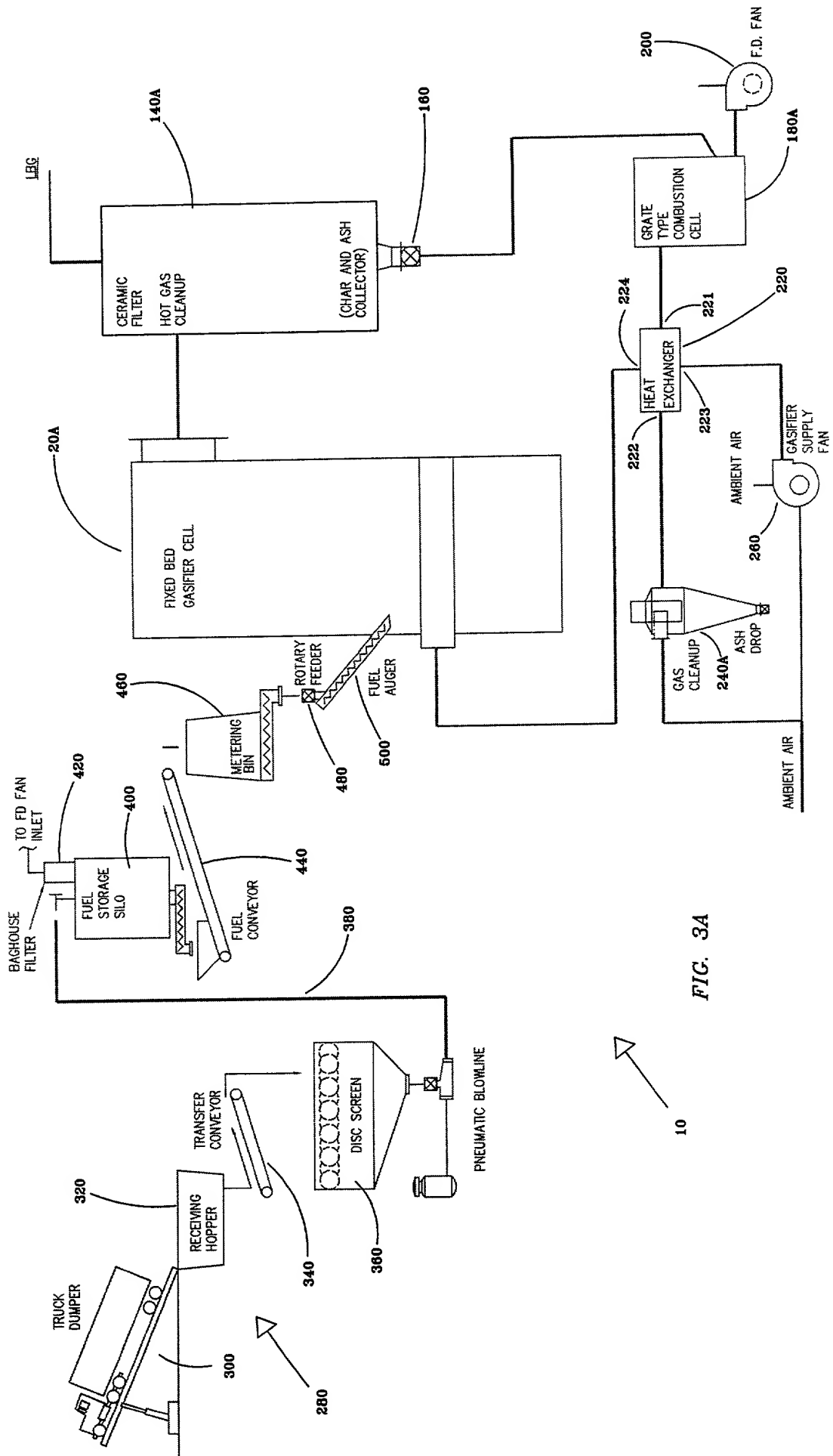


FIG. 3A

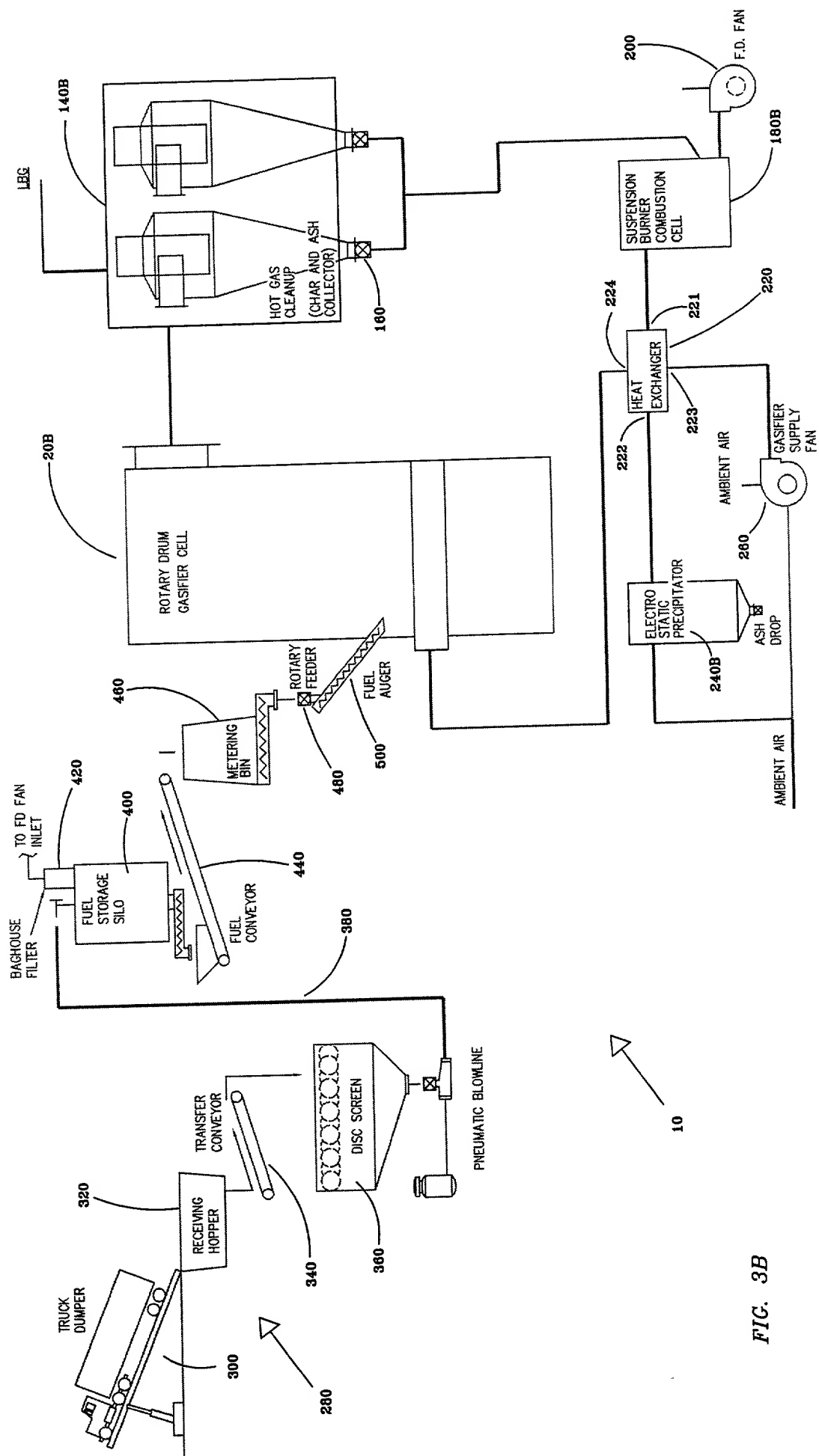


FIG. 3B

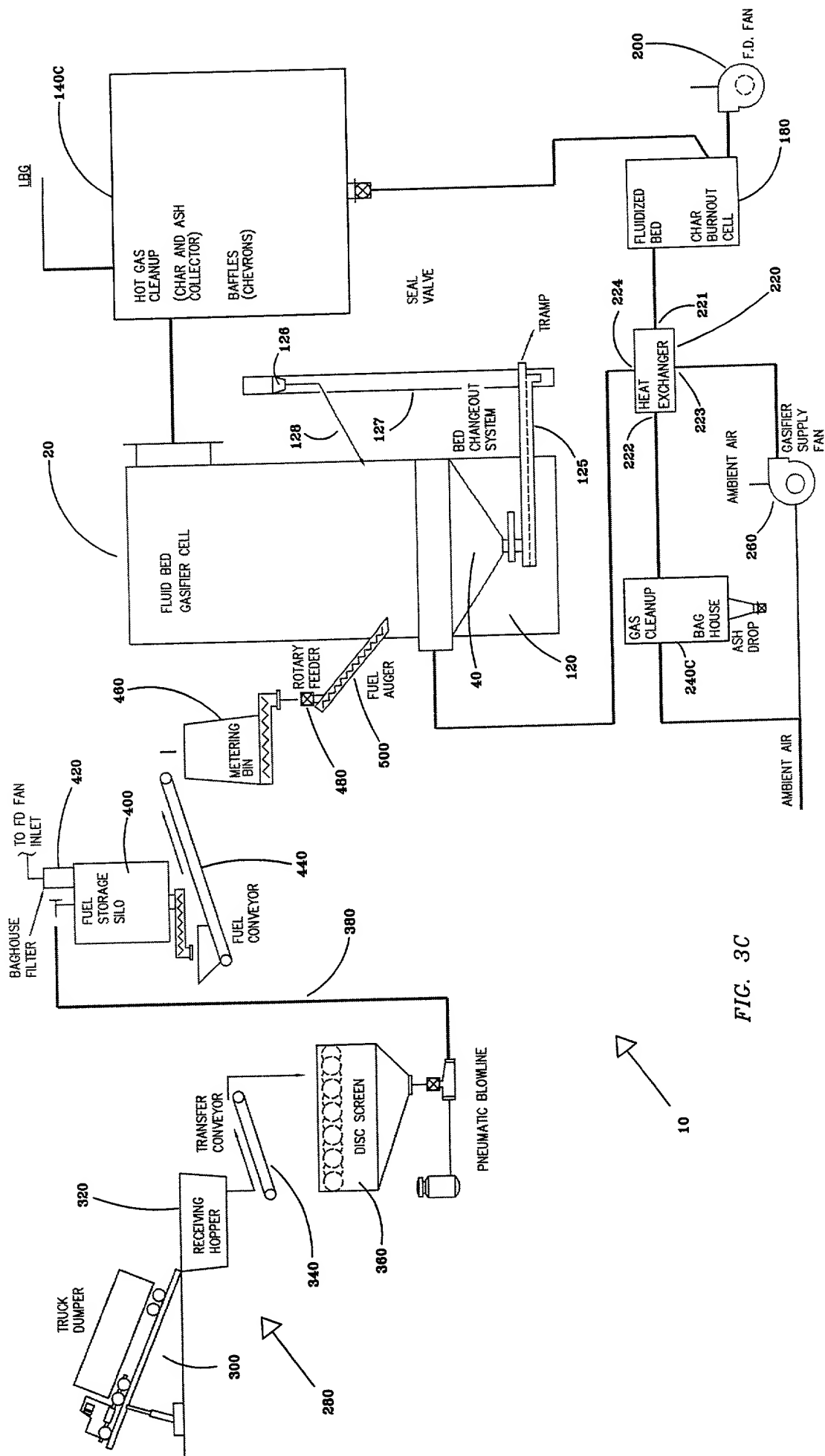


FIG. 4 is a schematic diagram of a fluid bed gasifier system. The system includes a metering bin (460) connected to a rotary feeder (480) via a fuel auger (500). The rotary feeder is connected to the fluid bed gasifier cell (20). Ambient air (260) is drawn into a gasifier supply fan (260) and then into the fluid bed gasifier cell (20). The fluid bed gasifier cell (20) is connected to a bed changeout system (120) which includes a tramp (125) and a bed changeout system (126). The bed changeout system (126) is connected to a tramp (125) and a bed changeout system (127). The bed changeout system (127) is connected to a tramp (125) and a bed changeout system (128). The bed changeout system (128) is connected to a tramp (125) and a bed changeout system (129).

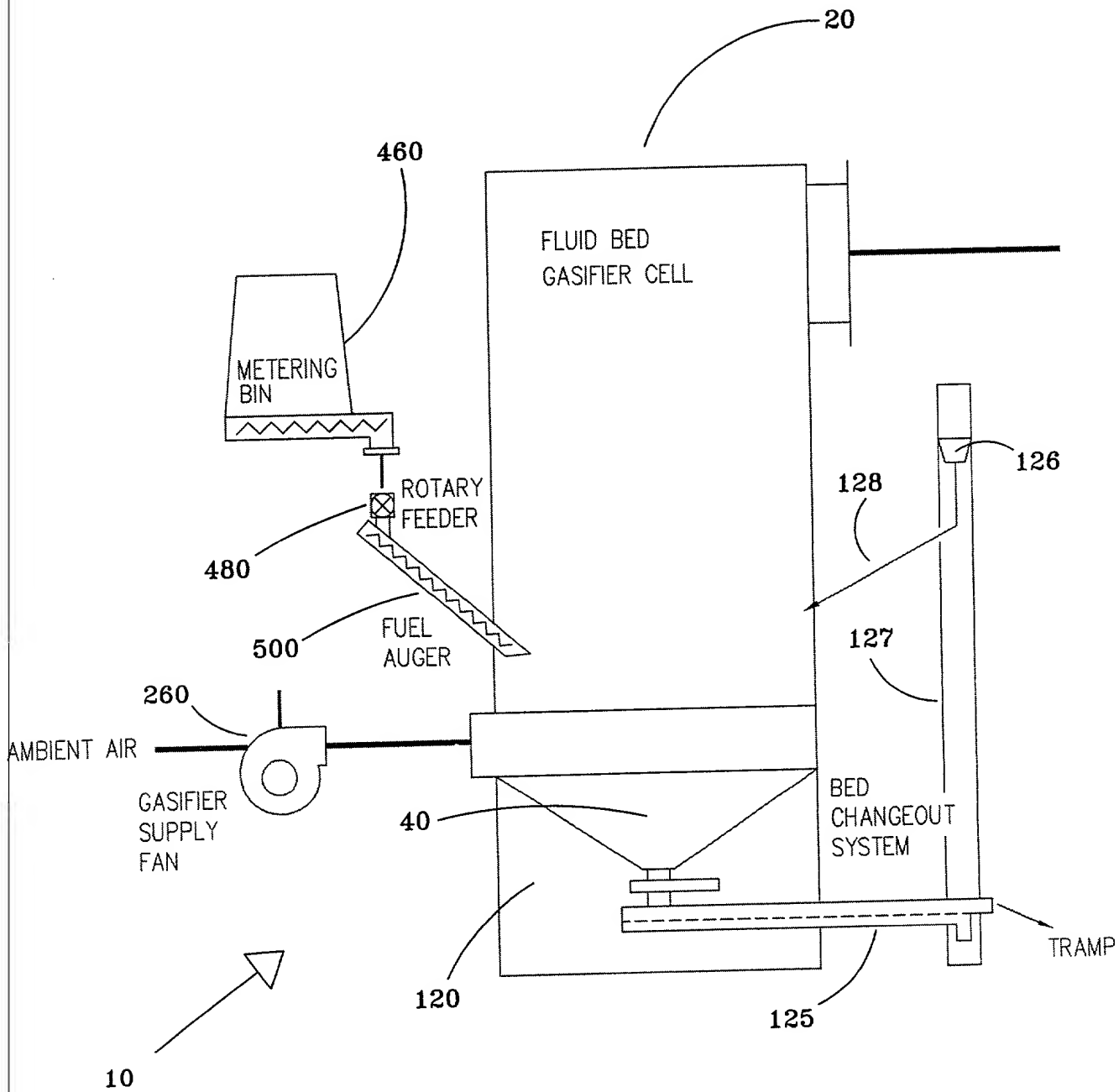


FIG. 4

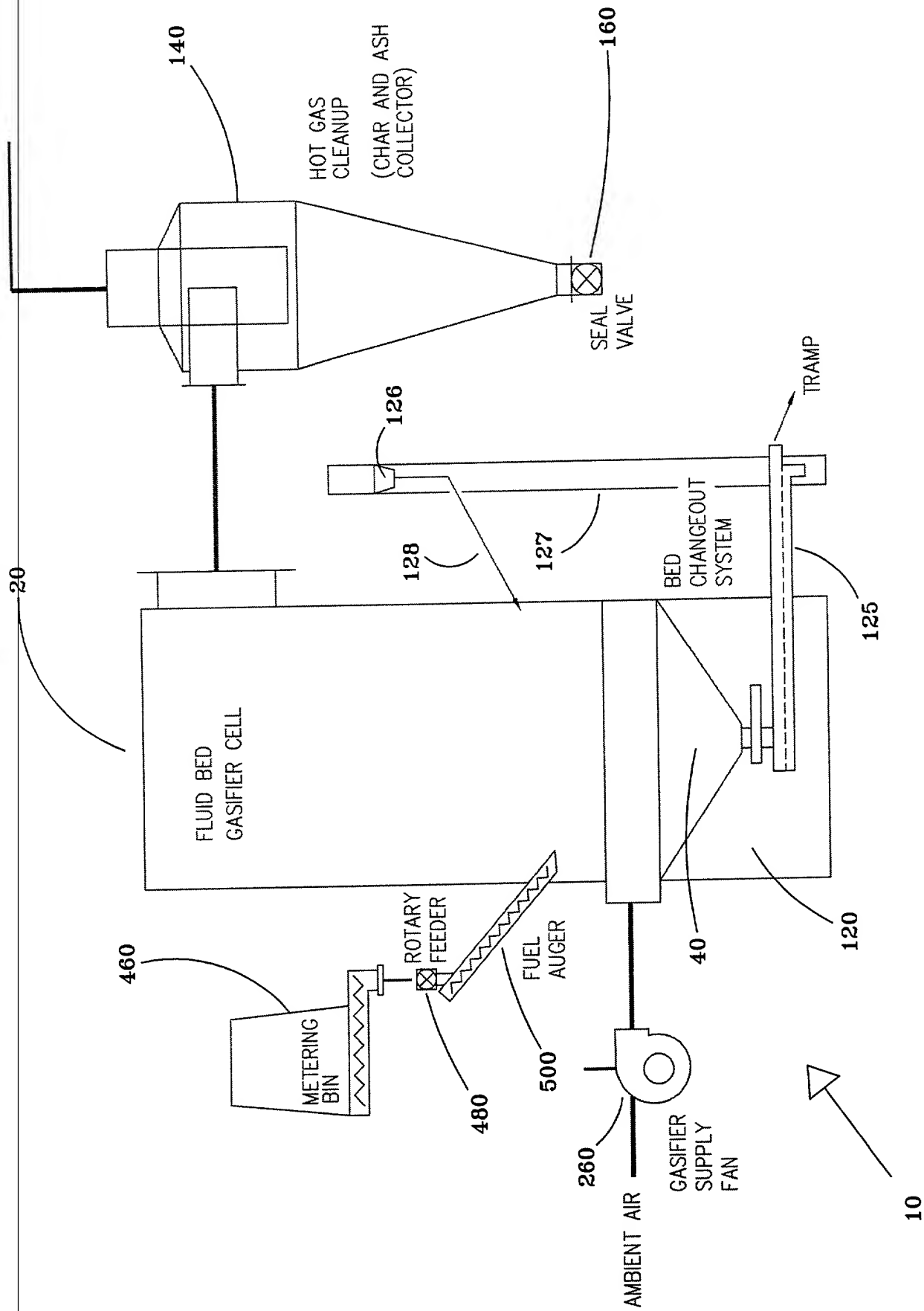


FIG. 5

FIG. 6 is a schematic diagram of a fluid bed gasifier system, showing the flow of gas and solids between various components.

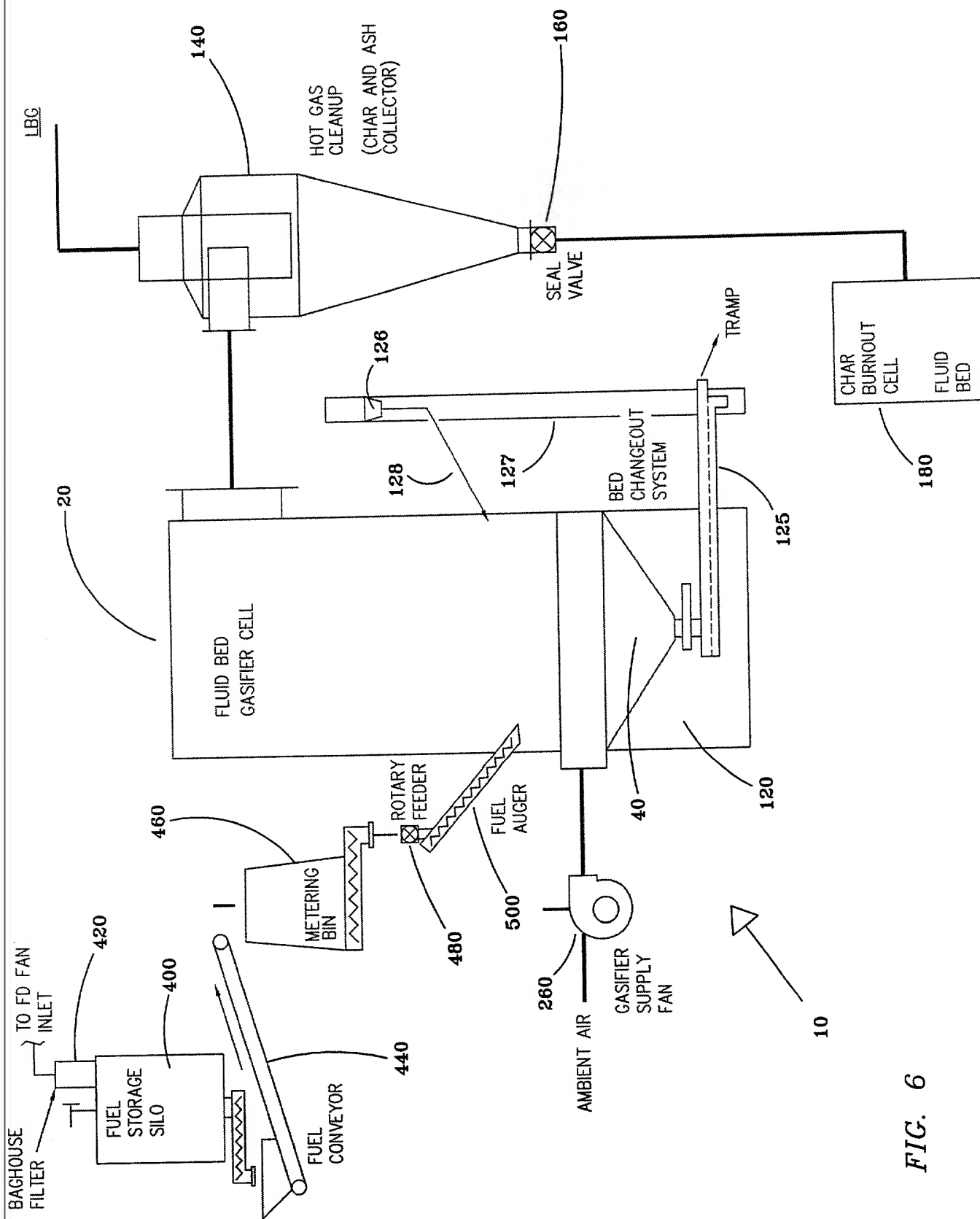


FIG. 6

FIG. 7 is a schematic diagram of a fluid bed gasifier system. The system includes a fuel storage silo (400) with a fuel conveyor (440) leading to a metering bin (460). A rotary feeder (480) and fuel auger (500) deliver fuel to the fluid bed gasifier cell (20). The gasifier cell is connected to a bed changeout system (120) which includes a tramp (125) and a seal valve (160). The gasifier cell is also connected to a hot gas cleanup (140) which includes a char and ash collector. The gasifier cell is connected to a char burnout cell fluid bed (180) which includes a heat exchanger (224) and a gas cleanup (240). The gasifier cell is connected to a gasifier supply fan (260) which draws ambient air (220) and provides gas cleanup (222). The gasifier cell is connected to a gasifier supply fan (260) which draws ambient air (220) and provides gas cleanup (222). The gasifier cell is connected to a gasifier supply fan (260) which draws ambient air (220) and provides gas cleanup (222).

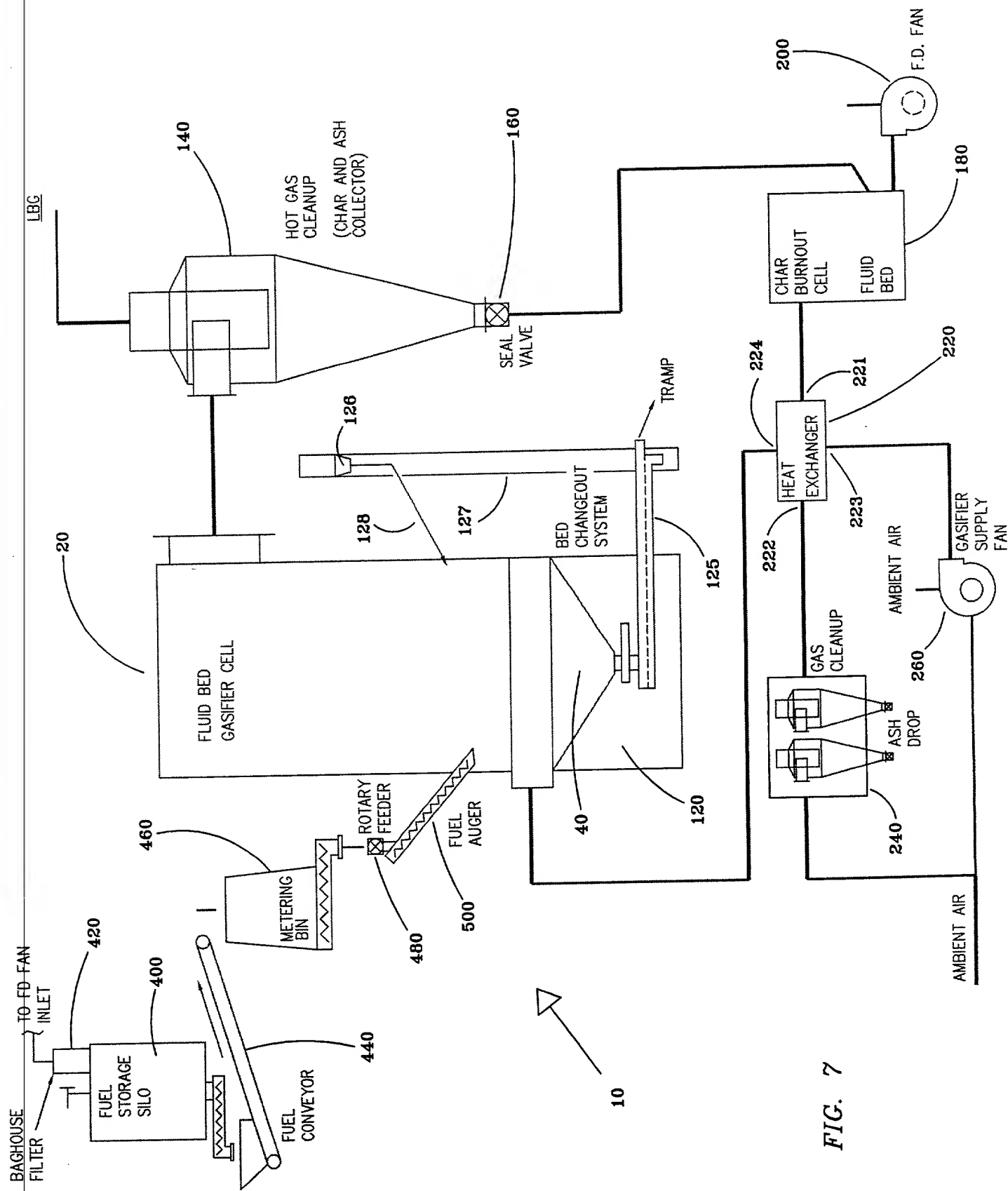


FIG. 7